

Part 2 - Remarks

This Amendment and Response responds to the office action of May 1, 2005. A petition for a three month extension of time and the fee therefor, accompanies this Amendment and Response, thereby extending the time for response to November 1, 2006.

In the May 1 office action, claims 35-83 were renumbered as claims 34-82, correction of the serial numbers for certain related patent applications was requested, the "objected to" status of claims 34 and 40 was withdrawn, claims 1, 2, 4-13, 16, 18-55, 77-80 and 82 were rejected under 35 USC 112, ¶2 as indefinite, claims 65-68 were rejected under 35 USC 103(a) as obvious from Cotterell (3,919,370) in view of Clynch (6,463,351), claims 57 and 58 were rejected under 35 USC 103(a) as obvious from Cotterell and Clynch in view of Brubaker (5,470,590), claims 69-76 were rejected under 35 USC 103(a) as obvious from Rogers (4,347,213) in view of Clynch, and an obviousness-type double patenting rejection was made with respect to claims 1, 2, 4-13, 16, 18-55 and 77-80 with respect to claims 1-19 of US patent 6,990,744.

Reconsideration is respectfully requested in view of the above amendments to the pending claims 1, 2, 4-13, 16, 18-55, 57, 65-68 and 73-81, and these remarks.

Renumbered Claims

In the claim listing in Part 1 above, previous claims 35-83 have now been renumbered as claims 34-82. The claims in the above listing should be consistent with the claim enumeration in the May 1 office action.

Specification-Related Applications

The Revised Preliminary Amendment, filed on or about April 5, 2004, amended the specification to replace the attorney docket numbers originally included in the specification with the corresponding US serial numbers. The Examiners requested to notify the undersigned if this Preliminary Amendment did not correct the serial number issue raised in the May 1 office action.

Section 112, ¶2 Rejection

Claims 1, 2, 4-8, 34, 40 and 81 have been amended to recite a crush of "resistance" characteristic of substantially constant crushing force "per unit area" . . . It is believed that this recitation fully resolves basis for the indefiniteness rejection as well as making the claim language scientifically accurate. The antecedent basis for the resistance characteristic is its use throughout the specification, especially at page 9, line 14, and at page 12, line 19 to page 14, line 21, among other places. The per unit area recitation is also found in the specification and claims, such as at page 7, line 19 and page 13, lines 29 and 31, and in original claims 4-6. No new matter has been added by these amendments. It is believed that the specification reasonably conveys the meaning that the crushing force is a resistance force per unit area.

In addition, claims 13, 34 and 40 have been amended to correct antecedent basis issues, without adding new matter.

Canceled Claims

Claims 58, 69-76 and 82 have been canceled, without prejudice to reassert or maintain that subject matter in this or a related application.

Obviousness Rejections

Reconsideration of the obviousness rejection of claims 65-68 is respectfully requested, in view of the amendment to claim 65.

Claim 65 has been amended by reciting that the plastic beads in the matrix are fused together at contact points which permit spaces between the beads to establish air ventilation permeability within the matrix. The basis for this amendment is in original claims 33, 39, 45 and 48, as well as in the specification. No new matter has been added. It is believed that neither Cotterell nor Clynnch teaches or suggests the concept of fusing together beads with spaces between the beads to establish air ventilation permeability within a matrix which forms the support structure for the cushion, in the context of the method recited in claim 65 and its dependent claims 66-68.

Cotterell discloses the techniques for mixing different densities of expandable thermoplastic beads so that when heated, the beads expand and fuse together to form

an article which has a variation in density. Because the thermoplastic beads are expandable when heated, it is believed that the resulting article is an integral solid with no spaces remaining between the beads to establish permeability for air ventilation within the article. Cotterell does not appear to discuss spaces between the fused-together beads, or any permeability of the article sufficient for air ventilation.

Clynch describes a technique for obtaining information which describes the surface of the body portion to which a prosthetic or orthotic structure is to conform. Clynch describes using conformable fabric which is impregnated with a curable resin. The conformable fabric is placed over the surface of the body portion to which the structure is to conform, and then the resin is cured to fix the fabric in position. In this manner the shape of the body portion is accurately obtained. The fabric is thereafter used by an elaborate process involving scanning and the like which is not relevant to the present invention, in order to simulate or mathematically define the body shape to which the prosthetic or orthotic structure is to conform. Clynch does not describe formation of the prosthetic or orthotic structure, and therefore cannot describe spaces within such a structure to obtain permeability for air ventilation.

Neither Cotterell nor Clynch describes or suggests the formation of a wheelchair cushion from a matrix of resilient fused-together plastic beads which have spaces between the beads to establish permeability for air ventilation through the cushion, in the manner recited in claims 65-68.

Fusing the beads together with spaces to provide permeability for air circulation is a significant improvement, because it allows the cushion or support contour to pass liquid and air. Enhanced air circulation eliminates the buildup of moisture which promotes the occurrence of sores. Passing liquid through the cushion is also a benefit for those patients with urinary incontinence or which build up significant perspiration due to sitting long-term in an impermeable cushion in a wheelchair. Passing liquid through the cushion is a benefit when cleaning the cushion. The applicant is not aware of any wheelchair cushion or support structure which has the porosity to pass liquid and

air. This is a significant improvement, particularly in wheelchair-bound patients, as described in the paragraph at page 21, line 24.

Without some teaching or suggesting spaces between fused-together beads to establish permeability for air ventilation, Cotterell and Clynch would appear to be an inappropriate basis for an obviousness rejection of amended claim 65 and its dependent claims 66-68.

Reconsideration of the obviousness rejection of claim 57 is respectfully requested, in view of the amendment to claim 57. Claim 57 has been amended to recite spaces between the fused-together beads to establish permeability for air ventilation, in the manner set forth. Claim 58 has been canceled. It is believed that none of Cotterell, Clynch or Brubaker teaches or suggests the concept of fusing together beads with spaces between the beads to establish air ventilation permeability within a matrix which forms the support structure for the cushion, in the context of the method recited in claim 57 and its dependent claim 81.

Cotterell and Clynch have been discussed above. Brubaker describes a method of making a cushion, and is mostly concerned with capturing the shape to be molded into the cushion. In regard to forming the cushion itself, Brubaker only describes the use of liquid foam material which is injected into a mold in which it then solidifies and cures to form the contoured cushion. Column 7, lines 19-23. Accordingly, Brubaker cannot describe or suggest the use of fused-together beads with spaces between the beads to provide permeability for air ventilation, because Brubaker specifically uses injectable liquid foam which solidifies. Nothing in Brubaker appears to discuss permeability of the cushion. Moreover, nothing in Brubaker suggests the use of fused-together beads with spaces to provide permeability for ventilation.

None of Cotterell, Clynch and Brubaker describes or suggests the formation of a cushion from fused-together plastic beads which have spaces between the beads to establish permeability for air ventilation through the cushion, in the manner recited in claim 57. Fusing the beads together with spaces to provide permeability for air circulation or liquid passage is a significant improvement, for the reasons noted above.

Without some teaching or suggestion of spaces between fused-together beads to establish permeability for air ventilation, an obviousness rejection based on Cotterell, Clynch and Brubaker would appear to be inappropriate with respect to amended claim 57, its dependent claim 81.

In regard to the obviousness rejection of claims 69-76, these claims and claim 82 have been canceled. Accordingly, the obviousness rejection of these claims is moot.

Obviousness-Type Double Patenting

Reconsideration of the obviousness-type double patenting rejection is respectfully requested. The invention described in US patent 6,990,744 is a method of evaluating the clearance between a support contour of a pre-existing seat cushion and part of the pelvic anatomy of a person who uses the cushion. This subject matter is completely unrelated to and not obvious with respect to a method of capturing a negative impression of an anatomical portion of a person (claim 1) or a method of creating a support contour for a seat cushion (claims 35 and 41). One technique involved in evaluating the clearance between the support contour and the pelvic anatomy, as described in the '744 patent, involves crushing a foam material. However, the crushed foam material serves only as a gauge for evaluating the clearance. There is no suggestion in the '744 patent of obtaining a negative impression of the anatomical contour, or of creating a support contour. Accordingly, the invention of the '744 patent is not closely enough related to the presently pending claims as to render the presently pending claims obvious if the '744 patent was prior art.

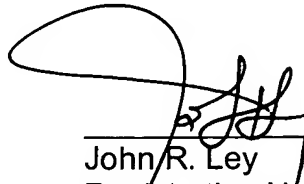
Conclusion

For the reasons articulated above, and others, it is believed that the indefiniteness of claims 1, 2, 4-13, 16, 18-55 and 77-80 have been resolved, and the obviousness rejections of claims 57 and 65-68 are believed to be inappropriate with respect to the amended claims. The obviousness-type double patenting is believed to be inapplicable to the pending claims for the reasons set forth above. Withdrawal of these rejections is respectfully requested.

The Examiner is encouraged to telephone the undersigned to attempt to resolve any further issues that are considered as inhibiting the immediate allowance of this application.

Respectfully submitted,

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